

Remotely-Operated Vehicle Surveys



In 2006, Marine Applied Research & Exploration (MARE) in partnership with the California Department of Fish & Game, the Nature Conservancy, and the Sanctuary completed the third annual remotely-operated vehicle (ROV) deep-water monitoring of finfish abundance of the Channel Islands marine reserves. The 2006 season covered 10 priority sites - 5 inside and 5 reference sites outside the reserves – totaling 100 km of deep-water video survey.

A ROV equipped with two video cameras enables the team to conduct video surveys beyond the depths of SCUBA divers. The focus for the project is to monitor changes in the abundance of select finfish of commercial and recreational importance around the rocky reef habitat. The project uses pairs of sites – one inside and one reference site outside the marine reserves. The video is analyzed to determine the abundance of species of recreational and commercial importance and habitat type. Species and abundances observed are mapped with habitat type to provide a detailed, geo-referenced record of the area. Comparisons between the reserve and reference site pairings will later be used to evaluate MPA effectiveness over time. The work contributes to the marine reserve monitoring effort, which seeks to characterize changes in the ecosystem as a result of marine reserve implementation.



MARE and CDFG employees with ROV on *Shearwater*: Mike Prall, Andy Laueremann, Dirk Rosen, Steve Holz, Christine Pattison & Konstantin Karpov.

The ROV surveys also located and identified over 40 pieces of derelict fishing gear in 2005 for removal, and in 2006 a fishing net weighing 4,000 pounds and covering 5,000 square feet of seafloor off Santa Rosa Island. Dr. Kirsten Gilardi of the SeaDoc Society at UC Davis and a team of divers removed the net.

Read more about this project on MARE's website:
<http://www.maregroup.org/>